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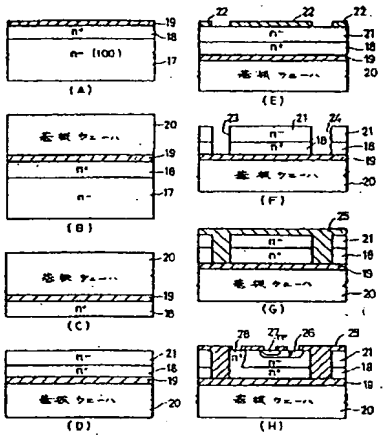
(54) MANUFACTURE OF SEMICONDUCTOR DEVICE

(57) Abstract:

PURPOSE: To form a buried high impurity concentration layer easily and facilitate a stable etching process after a support substrate is bonded by a method wherein a high impurity concentration layer is formed on the support substrate with an insulating film between the then a low impurity concentration layer is formed.

CONSTITUTION: An n^- type layer 21 which corresponds to a low impurity concentration layer is formed on an n^+ type diffused layer 18 by an epitaxial growth method as an element region. After a resist film 22 is applied to the n^- type layer 21 and patterned to have a required pattern, the diffused layer 18 and the n^- type layer 21 are respectively subjected to anisotropic etching by using the resist film 22 as a mask. If the resist film 22 is removed, trenches 23 and 24 are formed at the parts which are not covered with the resist film 22. Then an SiO_2 layer 25 is formed on the surface and in the trenches 23 and 24. By etching back the surface for levelling, an island region is formed with the SiO_2 layer 25. Thus a bipolar transistor which has a P-type base region 26 formed in the n^- type layer 21 and an n^+ type emitter region 27 and an n^+ type collector region formed in a p-type region.



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